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EXAMINER				
KRISHNAN, VIVEK V				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/783,026

Applicant(s)

TANIMOTO, AKIHITO

Examiner

VIVEK KRISHNAN

Art Unit

2145

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date February 23, 2004
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

This is a Non-Final Office Action Correspondence in response to U.S. Application No. 10/783026 filed on February 23, 2004, claiming priority to Japanese Patent Application No. 2003-046275, filed on February 24, 2003. Claims 1-12 are pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. Applicant is reminded of the proper language and format for an abstract of the disclosure.
The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

4. The abstract of the disclosure is objected to because it exceeds 150 word in length. Correction is required. See MPEP § 608.01(b).

Claim Objections

5. Claims 1-12 are objected to because of the following informalities: Claims are replete with grammatical errors including the lack of spacing between words and run-on sentences. Appropriate correction is required.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 10-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 10-12 recite "a computer program".

Any claim whose limitations are either explicitly claimed as being implemented in software, or could be reasonably interpreted as being implemented in software, must be claimed in combination with an appropriate medium to establish a statutory category of invention and

enable any functionality to be realized in order for the claimed subject matter to be statutory under the provisions of 35 U.S.C. § 101.

Furthermore, Applicants' disclosure leaves open the possibility that the claimed computer program is embodied in a signal, which is non-statutory subject matter.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Application Publication No. 2002/0105678 to Shiraiwa (hereinafter "Shiraiwa").

10. As to Claim 1, Shiraiwa discloses a printing method carried out by a printing device and a printing device (referenced hereinafter as the printing method) for receiving data from a plurality of data source apparatuses and then printing said data, said method comprising the steps of:

receiving a connection request from a first data source apparatus and establishing a logical connection with said first data source apparatus (Shiraiwa; Figures 5-8, and paragraphs

80 and 87-89, receiving a connection request from a host computer and establishing a connection with the host computer);

receiving a connection request from a second data source apparatus and setting the role of said printing device as a communication slave initially while a connection is established with said first data source apparatus, and then switching the role of said printing device from a communication slave to a communication master to enable a connection to be established with both said first and second data source apparatuses (Shiraiwa; Figures 5-8, and paragraphs 80 and 87-89, receiving a connection request from a digital camera; setting the role of the printer to function/slave while connected to the host computer; switching the role of the printer from a function/slave to a host/master);

receiving data from said first and second data source apparatuses while the connections are also established with said first and second data apparatuses (Shiraiwa; Figures 5-8, and paragraphs 80 and 87-89, receiving data from host computer and digital camera);

processing and printing said data received from said first data source apparatus and said second data source apparatus (Shiraiwa; Figures 5-8, and paragraphs 80 and 87-89, processing and printing data received from host computer and digital camera).

11. Claim 9 has similar limitations to Claims 1. Therefore it is rejected under Shiraiwa for the same reasons as set forth in the rejection of Claim 1.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2, 3, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa as applied to Claim 1 above, and further in view of U.S. Patent Application Publication No. 2002/0075510 A1 to Martinez (hereinafter "Martinez").

14. As to Claim 2, Shiraiwa discloses each and every limitation of Claim 1. Shiraiwa does not explicitly disclose, however Martinez discloses the step in which, when a logical connection is established with said second data source apparatus and data are received from said second data source apparatus while a connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, said received data are stored temporarily in a buffer, and when said data can be transferred to a second data processing portion, said data are read from said buffer and transferred to said second data processing portion (Martinez; Figures 2 and 5, and paragraphs 15 and 16, multiple apparatuses connected with printer; data processing portions for processing data received from the apparatuses; storing received data temporarily in a queue/buffer until the data can be processed).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed

by Shiraiwa, to include data processing portions and storing received data in a buffer temporarily, as disclosed by Martinez, in order to manage multiple requests to a printer.

15. As to Claim 3, Shiraiwa discloses each and every limitation of Claim 1. Shiraiwa does not explicitly disclose, however Martinez discloses the step in which, when a logical connection is established with said second data source apparatus and a command or data are received from said second data source apparatus while a logical connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, transmission of a response signal to said second data source apparatus is delayed, and when the data received from said second data source apparatus can be transferred to a second data processing portion, said response signal is transferred to said second data source apparatus (Martinez; Figures 2 and 5, and paragraphs 15, 16, and 22-25, multiple apparatuses connected with printer; data processing portions for processing data received from the apparatuses; storing received data temporarily in a queue/buffer until the data can be processed; indicating status of print job).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include data processing portions and delaying transmission of a response signal until received data can be processed, as disclosed by Martinez, in order to manage multiple requests to a printer.

16. Claims 10 and 11 have similar limitations to Claims 1-3. Therefore they are rejected under Shiraiwa and Martinez for the same reasons as set forth in the rejections of Claims 1-3.

17. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa as applied to Claim 1 above, and further in view of U.S. Patent No. 5,995,718 to Hiraïke et al. (hereinafter "Hiraïke").

18. As to Claim 4, Shiraiwa discloses each and every limitation of Claim 1. Shiraiwa does not explicitly disclose, however Hiraïke discloses the step in which, when a logical connection is established with said second data source apparatus and a request for notification of a credit value indicating the data size of the receivable data is received from said second data source apparatus while a logical connection is also established with said first data source apparatus and data received from said first data source apparatus are being transferred to a first data processing portion from among a plurality of data processing portions for processing data received from said data source apparatuses, said second data source apparatus is informed of said credit value in response to said notification request, and thus data are received from said second data source apparatus, stored temporarily in a buffer, and when said data can be transferred to a second data processing portion, said data are read from said buffer and transferred to said second data processing portion (Hiraïke; Figures 4, 5, 7, 8, and 17, printer informing a data source apparatus of available capacity upon request; storing received data temporarily in memory until data can be transferred for processing).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include to include data processing portions and a credit value, as disclosed by Hiraïke, in order to determine the available capacity of a printer prior to storing data in the printer memory.

19. As to Claim 5, Shiraiwa and Hiraïke disclose each and every limitation of Claim 4. Hiraïke further discloses wherein {an error message} [...] is transmitted back to said second data source apparatus in said transfer step when an empty region having a size which is equal to or greater than said credit value cannot be retained in said buffer upon reception of said credit value notification request from said second data source apparatus (Hiraïke; Figures 4, 5, 7, 8, and 17, returning an error message when not enough memory is available).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify a printing device and first and second data source apparatuses, as disclosed by Shiraiwa, to include to include data processing portions and a credit value, as disclosed by Hiraïke, in order to determine the available capacity of a printer prior to storing data in the printer memory.

Hiraïke does not explicitly disclose transmitting a credit value indicating zero.

However, it would have been an obvious matter of design choice to transmit a zero value instead of an error message, since applicant has not disclosed that transmitting a zero solves any

stated problem or is for any particular purpose and it appears that the invention would perform equally well with the transmission of an error message.

20. Claim 12 has similar limitations to Claims 1 and 4. Therefore it is rejected under Shiraiwa and Hiraike for the same reasons as set forth in the rejections of Claims 1 and 4.

21. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa and Martinez as applied to Claims 2 and 3 above, and further in view of U.S. Patent Application Publication No. 2004/0169880 A1 to Nakanishi et al. (hereinafter "Nakanishi").

22. As to Claim 6, Shiraiwa and Martinez disclose each and every limitation of Claims 2 and 3. Shiraiwa and Martinez do not explicitly disclose, however Nakanishi discloses wherein a logical connection is established with said data source apparatus in accordance with Bluetooth specifications in said connection step, and a profile provided on an upper OBEX level is executed in said transfer step or said transmitting back step (Nakanishi; paragraph 193, Bluetooth and OPEX).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify connection and transfer steps, as disclosed by Shiraiwa and Martinez, to include Bluetooth and OBEX, as disclosed by Nakanishi, in order to provide standard functionality for managing printers using Bluetooth technology.

23. As to Claim 7, Shiraiwa, Martinez, and Nakanishi disclose each and every limitation of Claim 6. Nakanishi further discloses wherein said profile is BPP or BIP (Nakanishi; paragraph 193, Bluetooth and BPP).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify connection and transfer steps, as disclosed by Shiraiwa and Martinez, to include Bluetooth and BPP, as disclosed by Nakanishi, in order to provide standard functionality for managing printers using Bluetooth technology.

24. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraiwa and Hiraike as applied to Claim 4 above, and further in view of U.S. Patent Application Publication No. 2005/0286466 A1 to Tagg et al. (hereinafter "Tagg").

25. As to Claim 8, Shiraiwa and Hiraike disclose each and every limitation of Claim 4. Shiraiwa and Hiraike do not explicitly disclose, however Tagg discloses wherein a logical connection is established with said data source apparatus in accordance with Bluetooth specifications in said connection step, and HCRP is performed in said transfer step (Tagg; Table 3, Bluetooth and HCRP).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify connection and transfer steps, as disclosed by Shiraiwa and Hiraike, to include Bluetooth and HCRP, as disclosed by Tagg, in order to provide standard protocol associated with Bluetooth technology.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VIVEK KRISHNAN whose telephone number is (571) 270-5009. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VK

/Jason D Cardone/
Supervisory Patent Examiner, Art Unit 2145